SARANOVSKIY, V.I.

Redistribution of rock pressure during the undermining of a rock stratum with layers that are hard to break. Gor. i ekon. vop. razrab. ugol'. i rud. mest. no.1:35-38 '62. (MIRA 16:7)
(Rock pressure) (Coal mines and mining)

BARANOVSKIY, V.I.; MURIN, A.N.; PREOBRAZHENSKIY, B.K.

Radiochemical study of the reactions of deep spallation and fission of tantalum by 680-MEV protons. Radiokhimia 4 no.4:470-479 '62. (MIRA 15:11)

(Tantalum--Isotopes)
(Nuclear fission) (Radiochemistry)

BARANOVSKIY, V.I., gornyy inzh.

Possibility of applying the chamber-and-pillar method in mining Donets Basin steeply dipping coal seams. Ugol' 37 no.8:31-32 Ag '62. (MIRA 15:9)
(Donets Basin--Coal mines and mining)

BARANOVSKIY, Viktor Ignat'yevich; SMIRENSKIY, M.M., red.izd-va; IL'INSKAYA, G.M., tekhn. red.

[Effect of natural factors on the selection of ways of working coal seams in deep horizons] Vliianie prirodnykh faktorov na vybor sposobov razrabotki ugol'nykh plastov na glubokikh gorizontakh. Moskva, Gosgortekhizdat, 1963. 178 p. (MIRA 16:6)

(Donets Basin--Coal mines and mining)

S/032/63/029/001/007/022
B104/B186

AUTHORS: Baluka, M., Baranovskiy, V. I., and Nikitin, M. K.

TITLE: Dissolution of metallic Rh and Ir and their alloys

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 1, 1963, 35

TEXT: A method of dissolving Rh and Ir and their alloys was developed (cf. G. H. Faye and W. R. Inman (Talanta, 3, 3, 277 (1960)). It is based on melting the metal with an excess of tin in the presence of ammonium chloride. The powdered metal is melted with a 100- to 1000-fold excess of tin at a temperature of 300 to 500°C for 50 minutes. To avoid the formation of a tin oxide film, ammonium chloride is repeatedly added. Melting and casting is carried out in a quartz or porcelain container. The ingots obtained are dissolved by heating in a crucible containing concentrated hydrochloric acid. If the process of dissolution is slow the melting process should be continued for another 20 or 30 minutes. The heavy powdery precipitation forming an alloy of tin with Ir or Rh is dissolved in a small quantity of aqua regia after washing with hydrochloric acid and water, the dissolved tin is removed from 6N HCl by repeated

extraction with ether. The extraction of tin by hydrochloric acid is accompanied by dissolution of ~ 1% of Ir (Rh). The dissolving time is about 2 hrs.

ASSOCIATION: Leningradskiy gosudarstvennyy univereitet
(Leningrad State University)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520010-9"

BARANOVSKIY, V.I.; LUR'YE, B.G.; MURIN, A.N.

Electric conductivity and self-diffusion coefficients of cations in silver iodide. Dokl.AN SSSR 105 no.6:1188-1191 D '55.(MLRA 9:4)

1.Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova. Predstavlene akademikom A.F.Ioffe.
(Silver iodide--Electric properties) (Cations)

SOV/112-57-6-13076

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 6, p 201 (USSR)

AUTHOR: Baranovskiy, V. I., Perel'tsveyg, A. M.

TITLE: One Cause of Leakages in Electron-Beam Tubes
(Ob odnoy prichine poyavleniya utechek v elektronno-luchevykh trubkakh)

PERIODICAL: Sb. materialov po vakuumnoy tekhnike, 1956, Nr 8, pp 3-8

ABSTRACT: It is pointed out that electron emission from unprotected ends of the heater toward the high-voltage mounting is one of the causes of leakages in electron-beam tubes. In the case of LO-709 tubes that have only one high-voltage mounted electrode, the authors suggest placing a shield between the heater and the anode and connecting the shield with the modulator; this measure has almost eliminated rejection of tubes on the grounds of high leakages. The presence of many high-voltage lead-ins in other tube types where rejection on the grounds of leakage is high does not permit such a simple solution of the problem.

R.I.V.

Card 1/1

BARANOVSKIJ, V.I.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1797
AUTHOR MURIN,A.N., NEFEDOV,V.D., BARANOVSKIJ,V.I., POPOV,D.K.
TITLE The Enrichment of the Isotopes of Iodide, Germanium, Arsenic and Antimony obtained after the Reaction (γ, n).
PERIODICAL Dokl.Akad.Nauk, 111,fasc.4, 806-807 (1956)
Issued: 1 / 1957

The here described experiments were carried out with the synchrotron of the Physical Institute of the Academy of Science in the USSR. The cross sections of the reaction (γ, n) are usually small. Thus, the maximum cross section of the reaction $Sb^{123}(\gamma,n)\ Sb^{122}$ (F γ = 14,8 MeV) is only $0{,}363.10^{-24}$ cm^2 with an integral cross section of the order 2 MeV.barn, and for the reaction $As^{75}(\gamma,n)\ As^{74}$ it is ~0,8 MeV.barn, and for the reaction $J^{127}(\gamma,n)J^{126}$ it is ~2 MeV.barn. Thus the production of preparations with high specific activity requires working out suitable varieties of the SZILARD-CHALMERS method. Works dealing with this field are very few and are cited in this connection.
Apart from preparative interest the radiochemical study of the reaction (γ,n) can be essential for the study of the chemistry of hot atoms within the range of high energies, for the energy liberated on the occasion of the reaction (γ,n) exceeds the energy conveyed on the occasion of the reaction (n,γ) by three or more orders.
For purposes of enrichment the authors in most cases used element-organic compounds which had formerly been used with success for the enrichment of radio-

active isotopes obtainable after the reaction (n, γ). The irradiation of the preparations took 48 hours and was brought about by the bremsstrahlung of the synchrotron of the Physical Institute of the Academy of Science in the USSR, with a maximum energy of the γ -quanta of 265 MeV. The targets were mounted on a cylindrical surface at a distance of 2 cm from the axis of the bundle and did not prevent the carrying out of the most important operations. Only 10% of the total intensity of the bundle of γ -quanta were utilized. Special control tests showed the practically complete lack of a neutron background in the bundle. The results obtained by the authors for the enrichment of arsenic, antimony, germanium, and iodide are shown in form of a table.

A long irradiation of the target leads to a noticeable radiation-chemical dissociation of the compounds used, which, of course, reduces the corresponding enrichment factors. Furthermore, attention must be drawn to the creation of some short-lived admixtures. Therefore, the preparations must either be left lying for 36 hours after irradiation, or they must be additionally purified.

INSTITUTION: Radium Institute "V.G.CHLOPIN" of the Academy of Science in the USSR.
Leningrad State University "A.A.ZDANOV".

BARANOVSKIY, V.I.

AUTHOR: MURIN, A.N., NEFEDOV, V.D., POPOV, D.K., BARANOVSKIY, V.I.

TITLE: On the Successive Neutron Capture in Antimony.
(O posledovatel'nom neytronnom zakhvate v sur'me-Russian)

PERIODICAL: Atomnaya Energiya, 1957, Vol 2, Nr 6, pp 553-553 (U.S.S.R.)

ABSTRACT: On the occasion of the irradiation of a sufficiently intensive neutron flux a twofold neutron capture according to the scheme

$Sb^{123}(n,\gamma)Sb^{124}$ ($T=60$ Days) $(n,\gamma)Sb^{125}$ ($T = 2,7$ Years)

is possible. By means of the ß-decay Sb^{125} goes over into Te^{125m} ($T=58$ Days) and this is the highest isomeric state of the stable Te^{125}. From the samples of the antimony irradiated by neutrons deposited for about one year (for the purpose of a sufficient accumulation of Te^{125m} in antimony) the authors separated the Te^{125m}. Stable Te here served as a carrier. The metallic tellurium was separated from the antimony by reduction with tin-dichloride. An important activity of the Te^{125m} was observed in the separated tellurium; it was identified after the half value period (57 ± 4 days) from the accumulation in the antimony and from the curve of the absorption of the conversion electrons in aluminum. This curve, by the way, agrees with those given by G.Friedlander, M.Goldhaber, G.Scharff-Goldhaber, Phys.Rev. 74, 981 (1948). Thus, the existence of a successive (double) capture which develops according to the scheme given here, may be assumed as an established fact.

Tests were made to evaluate the cross section of the activation of

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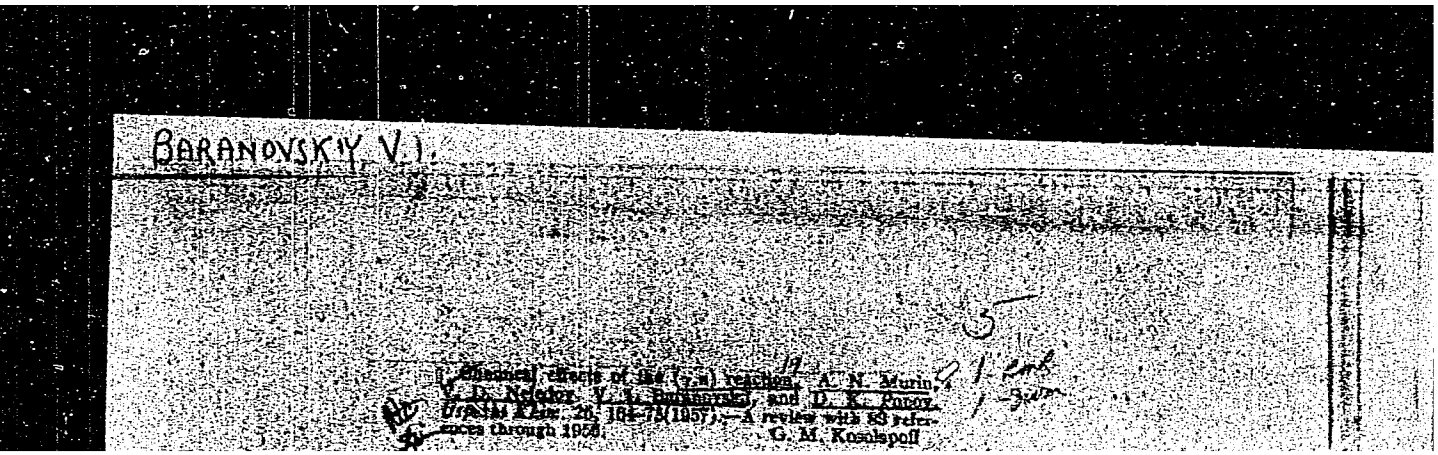
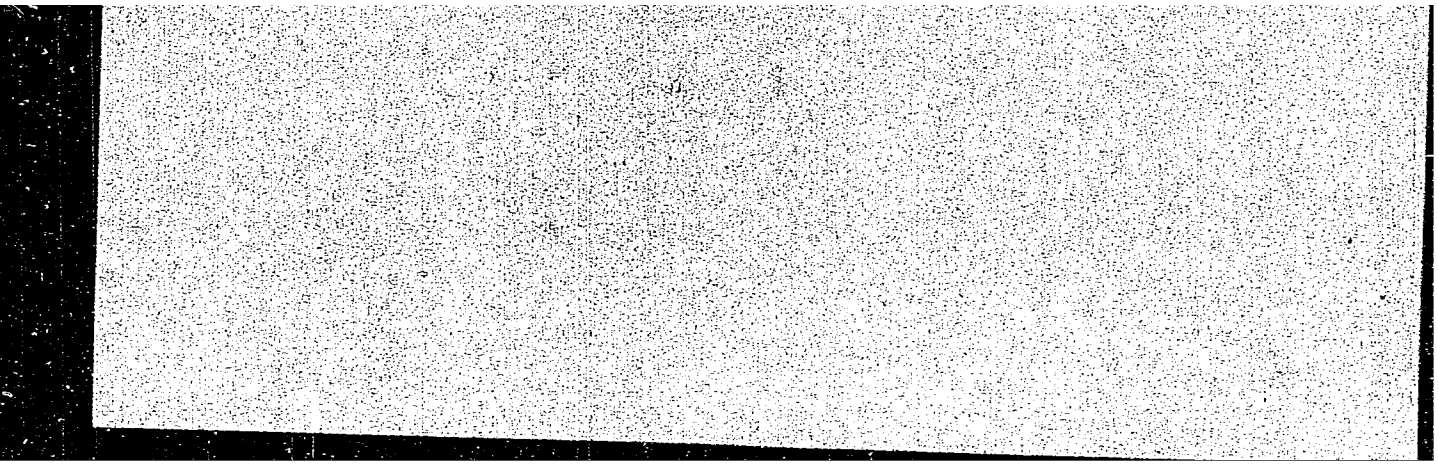


BARANOVSKIY, V. I.

[Chemical] effects of the (γ,n) reaction. A. N. Murin, V. D. Nefedov, V. I. Baranovskiĭ, and D. K. Potapov. *Uspekhi Khim.* 26: 164-78(1957).—A review with 83 references through 1956. G. M. Kosolapoff



APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520010-9"

SOV/48-21-7-7/26

AUTHORS: Zamyatnin, V. I., Lukin, A. N., Pokrovskiy, V. N., Yutlandov, I. A.

TITLE: More Numbers of Tb Isotopes Showing Neutron Deficiency (O massovykh chislakh neytronodefitsitnykh izotopov Tb)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1956, Vol. 22, Nr 7, pp. 808-810 (USSR)

ABSTRACT: For a more precise determination of the mass numbers of Tb isotopes present in the fraction, the attempt was made to establish the genetic connections by means of a repeated chromatographic separation of the daughter elements, and by examining these. This method permits to determine both the mass number of the parent isotope (for a known daughter isotope), and its half-life (provided that the quantity of daughter isotope separated will be proportional to $e^{-\lambda t}$ for equal intervals between the separations, λ being the decay coefficient). In this way the Tb isotopes with A = 149, 151, and 153 may be studied if the corresponding radioactive Gd isotopes (Z = 64) are known. Other Tb isotopes, however, in decay transmutate to stable Gd isotopes. With all four separat-

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Mass Numbers of Tb Isotopes Showing Neutron Deficiency

ions carried out from Tb, two isotopes Gd^{153} and Gd^{151} were observed. No other daughter elements were found in noticeable quantities. The isotope Tb^{153} with $T_{1/2}$ = 2,4 days may be regarded as certainly existent. Best visible in the γ-spectrum of Tb^{153} is the group of lines in the range from 205 to 210 keV. The intensity of this γ-line group observed in the Tb fraction spectrum decreased at a rate of $T_{1/2} \sim$ 2,7 days. The other Gd^{151} isotope found (daughter isotope) belongs to chain B, its half-life $T_{1/2}$ being 120 - 150 days according to the authors' data, the γ-spectrum consisting of the lines 154 and 247 keV. For the parent substance a half-life $T_{1/2}$ = = 18 ± 2 hours was found. - In view of the genetic connection between Tb^{151} and Gd^{151} which was not observed before, the mass numbers for these isotopes may be considered as more trustworthy than had formerly been assumed. Since the presence of Tb^{154} in the Tb fraction could neither be confirmed nor excluded in these experiments, it cannot be stated with certainty to which of these isotopes (or their mixtures) the 270 and 345 keV γ-lines belong that were observed by the authors. - The fact that Eu is absent among the daughter elements permits us to say that the β-decay component in Tb^{151}

Mass Numbers of Pa isotopes having neutron deficiency [illegible]

does not exceed 1 [illegible] (as compared with electron capture). Examination of short-life fraction isomers of a low Pa splitting made it possible to establish a genetic connection between Pa^{229} and Ac^{225}. As the mass number determined for Pa^{229} is considered as trustworthy, this connection permits to take the [illegible] value for Ac^{225} as well. - Acknowledgement is made to N. A. Preobrazhenskiy and V. N. Mel'nikov who were helpful in chromatographic separation, and to N. Bushuyev for his assistance with the measurements. There are 1 figure, 1 table, and 15 references, 6 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin, Academy of Sciences USSR)

Card 3/3

24 (5)

AUTHORS: Baranovskiy, V. I., Larionov, O. V., Nikitin, M. K., Tkachenko, A. A.

TITLE: On the Problem of Natural Neutron Activity of Arsenic and Antimony (K voprosu o yestestvennoy neytronnoy aktivnosti mysh'yaka i sur'my)

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 2, pp 25-26 (USSR)

SOV/54-59-2-4/24

ABSTRACT: In the papers by A. Dorabialska and M. Serwinski (Refs 1-3), it had been asserted that ordinary arsenic and antimony are sources of quick neutrons. By means of these neutrons, the authors had succeeded in activating Cu, Br, J and other elements. They set up a conversion scheme which, however, disagrees with the experimental mass determinations of the elements occurring in this scheme; even the inverse reactions had been observed in experiments. In order to prove that no neutrons are radiated from the said elements under natural conditions, the same experiments as described in the papers (Refs 1-3) were repeated in this paper. The exposition of the materials to be activated was carried out both by direct contact of As and Sb of high purity with activated materials,

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and with the use of moderators. All investigations proceeded with a negative result. Under experimental conditions as they were used in this investigation, a neutron decay of the As- and Sb-nuclei could have been detected only at a half-life period of $T_{\frac{1}{2}} \leqslant 10^{16}$ a. For the self-activation of the said nuclei, the background of the neutron capturing cross section should have been increased which has not been detected either. β-particles from a β-decay with energies $\geqslant 0.05$ Mev were missing. In all results obtained, the authors could not find a foundation for the assertion of a possible independent neutron decay in the As- and Sb-nuclei. Finally, the authors thank V. D. Nefedov for the discussions. There are 6 references, 1 of which is Soviet.

SUBMITTED: June 14, 1958

Card 2/2

BARANOVSKIY, V.I.; LARIONOV, O.V.; NIKITIN, M.K.; TKACHENKO, A.A.

Natural neutron activity of arsenic and antimony. Vest.LGU 14 no.10:25-26 '59. (MIRA 12:6)
(Arsenic--Isotopes) (Antimony--Isotopes)
(Neutrons)

24(5),24(7)

AUTHORS: Baranovskiy, V. I., Pokrovskiy, V. N. SOV/48-23-7-5/31

TITLE: γ-Spectrum of Tu^{166} and Yb^{166} (γ-spektr Tu^{166} i Yb^{166})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 819-820 (USSR)

ABSTRACT: The authors investigated (Ref 1) the chains $Yb^{166} \rightarrow Tu^{166} \rightarrow Er^{166}$ of the rare earth products of the deep disintegration of Ta, measuring the γ-spectrum of the mixture $Yb^{166} + Tu^{166}$ and of pure Tu^{166}. As the energy of the γ-lines and their relative intensity are practically in agreement at $E_\gamma > 100$ kev, it can be concluded that Yb^{166} has no lines in the range investigated. From the relative intensity of the 80 kev γ-lines, however, it can be concluded that Yb^{166} has 80 kev γ-lines. Accurate measurements were carried out in this range, and it became clear that in the fraction Yb also Yb^{169} is present besides Yb^{166}. The data obtained for the γ-spectrum of Tu^{166} agree with the data of the spectrum of the conversion electrons of Tu^{166} (see the preceding paper in this issue). The authors

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γ-Spectrum of Tu^{166} and Yb^{166}

SOV/48-23-7-5/31

thank A. N. Murin for his steady interest in the work, as well as B. K. Preobrazhenskiy and A. V. Kalyamin for the execution of the chromatographic separation. There are 6 references, 2 of which are Soviet.

ASSOCIATION: Radiyevyy institut imeni V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR). Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

Card 2/2

24(5)
AUTHORS: Baranovskiy, V. I., Kalyamin, A. V. SOV/48-23-7-9/31

TITLE: On the Spectra of the Neutron-deficient Isotopes of Hf (O spektrakh neytronodefitsitnykh izotopov Hf)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, p 831 (USSR)

ABSTRACT: The authors investigated the fractions of Hf separated from Ta by the scintillation method. These fractions were irradiated by 680 Mev protons accelerated in the synchrocyclotron of the OIYaI. An isotope of Hf with the period of 23.5 hours was identified by the authors as Hf^{173}. A half life of 12 hours was determined for Hf^{171}. The results in known publications deviating from these results are pointed out. The lines occurring in Hf^{173} (125 and 300 kev), as well as the lines in the energy range of 400-700 kev of Hf^{171} are dealt with, and the relative intensities are indicated. Finally, the authors thank the synchrocyclotron team, and A. N. Murin and G. M. Gorodinskiy for their attention paid to the work. There are 1 table and 5 references, 1 of which is Soviet.

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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520010-9"

On the Spectra of the Neutron-deficient Isotopes of Hf SOV/48-23-7-9/31

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

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PHASE I BOOK EXPLOITATION SOV/5404

Murin, A. N., V. D. Nefedov, and V. P. Shvedov, eds.

Radiokhimiya i khimiya yadernykh protsessov (Radiochemistry and the Chemistry of Nuclear Processes) Leningrad, Goskhimizdat, 1960. 784 p. Errata slip inserted. 13,000 copies printed.

Ed.: F. Yu. Rachinskiy; Tech. Ed.: Ye. Ya. Erlikh.

PURPOSE : This textbook is intended for students of physical chemistry or radiochemistry at universities and schools of higher education. It may also serve as a handbook for scientific workers and technical personnel in the radiochemical industries and other related branches.

COVERAGE: The textbook deals with problems in modern radiochemistry, including adsorption, cocrystallization, isotope exchange in radioactive elements, the chemistry of nuclear processes, and methods of preparing radioactive isotopes and labeled compounds. Special attention has been given to chemical processes caused by radioactive transformations and radiation. In the main the book was compiled by person-

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nel of the Radiochemistry Department, Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov), and the Department of the Technology of Artificial Radioactive Isotopes, Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet). No personalities are mentioned. References accompany individual chapters.

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S/048/60/024/03/11/019
B006/B014

24.6810

AUTHORS: Baranovskiy, V. I., Gorodinskiy, G. M.

TITLE: Determination of the Number of Decay Events of Electron-capturing Preparations by Means of a 4π Scintillation Counter

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 3, pp. 313-323

TEXT: The article under review was read at the Tenth All-Union Conference on Nuclear Spectroscopy (Moscow, January 19 - 27, 1960). The complicated problem of carrying out absolute countings in 4π geometry was solved by the authors with the help of a CsI(Tl) scintillation counter. A detailed description is given of the counting technique and the theory of determination of the desired quantities. The counter described is suited for counting radiations with E > 30 kev. The crystal used for the counter had a diameter of 30 mm and a height of 25 mm. The sample (Tu^{167} in the above-mentioned case) was placed into a 3 mm thick, 13 mm deep hole.

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Determination of the Number of Decay Events of Electron-capturing Preparations by Means of a 4π Scintillation Counter

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The solid angle did not deviate by more than 1 - 2 per cent from 4π. The hole in the crystal was lined with aluminum foil (3.4 mg/cm^2), so that the preparation lay on the bottom of this "container". Fig. 2 shows the γ-spectrum of the Tu^{167} preparation, which was recorded inside the crystal. The determination of the relation between the decays N_0 that have taken place and the decays N_{count} that were recorded by the counter is now the principal theoretical problem. It is assumed that $N_{count} = \xi N_0$. ξ is theoretically calculated for the i-th and the l-th channels of the device, and one obtains formula (7). In the following section, the authors discuss the determination of the efficiency of the crystal with respect to γ-radiation, and some formulas are given. The next section deals with an analysis of formula (7), which gives ξ. It is shown that the isotopes under consideration may be divided into two classes: 1) One class embraces the isotopes whose decay energy exceeds considerably the potential energy of the K-electron. In this case, the ground state is reached only in few decays. For these isotopes, $\xi = 0.95 \pm 0.05$ (error $\pm$ 1 -2%), irrespective of the decay scheme.

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Determination of the Number of Decay Events of Electron-capturing Preparations by Means of a 4π Scintillation Counter

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2) The other class comprises the isotopes with a small decay energy. In this case, the ground state is reached in the major part of decays. Here, ξ depends on the decay scheme of the respective isotope. In the last section, the authors discuss the determination of ξ in the case of isomeric transition. Finally, it is said that the above-described counter is very useful for recording X-rays and gamma rays in a wide energy range, and that it is highly sensitive. It is possible to measure activities of up to 10^{-10} curies (statistical error of ± 5%). Further, the counter records decay events very accurately (between ±1% and ±5%), and is easy to operate. The authors finally thank A. N. Murin and B. K. Preobrazhenskiy for their discussions. There are 8 figures, 2 tables, and 9 references, 8 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

Card 3/3

BARANOVSKIY, Viktor Iosifovich; ZHIGAREV, A.A., kand. tekhn. nauk, red.; VORONIN, K.P., tekhn. red.

[Electron-beam tubes] Elektronno-luchevye trubki. Moskva, Gos. energ. izd-vo, 1961. 223 p. (MIRA 14:8)
(Cathode ray tubes)

BARANOWSKI, B.

Surname (in caps); Given Names

Country: Poland

Academic Degrees: Not stated

Affiliation: Institute of Physical Chemistry, Polish Academy of Sciences (Instytut Chemii Fizycznej, PAN)

Source: Warsaw, Bulletin de l'Académie Polonaise des Sciences, Série des Sciences Chimiques, Vol 9, No 3, Mar 61, pp 159-162.

Data: "Irreversible Processes within the Surface-phase Treated Thermodynamically."

BARANOVSKIY, V.I.; MURIN, A.N.

Calculating the cross sections of the products of the spallation reaction. Izv. AN SSSR. Ser. fiz. 25 no.7:882-892 Jl '61. (MIRA 14:7)

1. Radiyevyy institut im. V.G. Khlopina AN SSSR.
(Nuclear reactions)

BARANOVSKIY, V.I.; NIKITIN, M.K.

Ion exchange in HF solutions. Non-ion exchange sorption of hydrofluoric acid by ion exchangers. Koll.zhur. 26 no.2:153-155 Mr-Ap '64. (MIRA 17:4)

1. Leningradskiy universitet imeni Zhdanova.

BARANOVSKIY, V.I.; SHMYKOV, I.P.; UTOCHKIN, V.A.

Automatic pressure measurements by means of models made of equivalent materials. Nauch. soob. IGD 22:75-78 '63.
(MIRA 17:5)

BARANOVSKIY, V.I., doktor tekhn. nauk

Preservation of development workings at deep levels. Ugol' 39 no.3:3-7 My'64. (MIRA 17:5)

26441
S/048/61/025/007/003/005
B108/B209

24666

AUTHORS: Baranovskiy, V. M., and Murin, A. N.

TITLE: Calculation of the production cross section for spallation fragments

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 7, 1961, 882 - 892

TEXT: This paper was read at the XI Annual Conference on Nuclear Spectroscopy in Riga, January 25 - February 2, 1961. S. G. Rudstam's method of calculating the above cross section (Refs. 3, 4: Phil. Mag., 46, 344 (1955); Spallation of Medium Weight Elements. Univ. of Uppsala, Sweden, 1956) is not applicable to heavy-nucleus spallation; it has to be modified. The following are the three formulas on which the calculations are based: $\sigma(A,Z)_{ind} = \left[\exp\left[pA - Q - R(Z-SA)^2\right]\right.$ (1) for the cross section of the individual fragments from spallation, $\sigma(A,Z)_{sum} = e^{-pA-Q}\int_{Z-1/2}^{\infty} e^{-R(Z'-SA)^2} dZ'$ for the total production cross section, and

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S/048/61/025/007/003/005
B108/B209

Calculation of the...

$\sigma(A) = e^{pA-q} \int_{-\infty}^{\infty} e^{-R(Z-SA)^2} dZ$ for the total cross section of isobars (with given A) produced in spallation. The parameter R determines the curvature of the curve $\frac{\sigma(A,Z)_{sum}}{\sigma(A)} = f(Z-SA)$ and, when S is properly chosen, all points must lie on a curve of the form $0.5 - \Phi(a)$. $\Phi(a) = \frac{1}{\sqrt{\pi}} \int_0^a e^{-t^2} dt$ is a tabulated function, with the aid of which the individual and total cross sections may be written in the form $\sigma(A,Z)_{ind} = \sigma(A)\left[\Phi(\sqrt{R}\ (Z - SA + 1/2)) - \Phi(\sqrt{R}\ (Z - SA - 1/2))\right]$ (5) and $\sigma(A,Z)_{sum} = \sigma(A)\left[0.5 - \Phi(\sqrt{R}\ (Z - SA - 1/2))\right]$ (4). Strictly speaking, the parameter R in (1) is not the same as that in (4) and (5) but is connected with that in (1) by the relation $R = 4\pi\left[\Phi(\frac{1}{2}\sqrt{R'})\right]^2$. In short, the following recipe may be traced: Construction of a $\sigma(A)$ curve, choice of the parameter S, construction of the $f(Z - SA)$ curve as indicated above. $Z - SA = 0$ should

Card 2/5

correspond to a ratio of the cross sections equal to 0.5, which is a criterion for the proper choice of S. Determination of R′ from the latter curves. Determination of p from the formula $p = \frac{\Delta \ln \sigma(A)}{\Delta A}$. The parameter S is not the same for all mass numbers, but it may be assumed as a constant within the range of mass numbers where $\sigma(A)$ obeys the exponential law. The results concerning the parameters p, S, and $\sqrt{R'}$ are given in Table 1. For the determination of the production cross section for isotopes from spallation of any element by fast protons, the authors recommend the following way: Plotting of the isobars versus mass number curve. The plateau appearing on this curve when the mass number is near that of the target may be determined from results obtained by the Monte-Karlo method. The parameter p determines the rest of the curve. The great discrepancy between the experimental results of other authors and the calculated values (about 120%) is traced back to inadequate experimental equipment. B. S. Dzhelepov is thanked for his interest. There are 6 figures, 2 tables, and 22 references: 7 Soviet and 15 non-Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences USSR)

BARANOVSKIY, V.V.

Judgment of variations in the absolute distance. Probl.fiziol.opt. 12:239-245 '58 (MIRA 11:6)
(VISION)

Baranovskiy, V.V.

USSR/Optics - Physiological Optics, K-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35925

Author: Baranovskiy, V. V.

Institution: Scientific Research Testing Institutes for Aviation Medicine, USSR

Title: On the Problem of Estimating the Absolute Distance of Objects

Original Periodical: Probl. fiziol. optiki, 1955, 11, 56-61

Abstract: The subject observed in moving objects through a sighting slot 1.5 cm wide cut in bent plywood. The slot was in the form of an arc greater than 180°. The lower portion of the screen blocked off the view of the earth's covering, so that the observer could see in the slot only a strip of blue sky, on which he saw the central portion of a vertical round stick. The latter, at a distance of 40 m from the observer, was placed on a moving platform, which the observer himself could move with the aid of a cable. The stick was visible at an angle of 1'42". The estimate of the absolute distance was made both binocularly as well as monocularly. The

Card 1/2

USSR/Optics - Physiological Optics, K-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35925

Abstract: data obtained for 69 subjects with full binocular vision, while observing with both eyes, are given in terms of a threshold, averaging 200 cm, while in the case of monocular observations they are rougher, and approximately 300 cm on the average. A conclusion is drawn that the proprioceptive impulses, traveling from the convergence apparatus, determine the finer sensitivity to the perception of the absolute distance of objects.

Card 2/2

SIDOROV, Orest Aleksandrovich; ISAKOV, P.K., doktor med. nauk, retsenzent; SOKOLOV, A.I., inzh., red.; BARANOVSKIY, V.V., doktor med. nauk, red.; YUGANOV, Ye.M., kand. med. nauk, red.; ANTONOVA, S.D., red. izd-va; ORESHKINA, V.I., tekhn. red.

[Human physiological factors determining the arrangement of a machine control board]Fiziologicheskie faktory cheloveka, opredeliaiushchie komponovku upravleniia mashinoi. Moskva, Oborongiz, 362 p. 1962. (MIRA 15:10)
(Automatic control) (Human engineering)

BARANOVSKIY, V. V.

"Compressed Air and Mechanical Cleaning of Shredded Tobacco," Tabak, 13, No.4, 1952

BARANOVSKIY, V. V., PETROV, Yu. P. and KOVALEV, V. K.

"A device for investigating optical functions given a limited time for the presentation of objects" - p. 69

Voyenno Meditsinskiy Zhurnal, No. 3, 1962

BARANOVSKIY, Valentin Viktorovich; SHUGAL, Yakov Lazarevich; SHISHKIN, S.V., red.; BORUNOV, N.I., tekhn. red.

[Laminated plastics for electrical engineering applications] Sloistye plastiki elektrotekhnicheskogo naznacheniia. Moskva, Gosenergoizdat, 1963. 230 p. (Polimery v elektroizoliatsionnoi tekhnike, no.6) (MIRA 17:2)

ACCESSION NR: AT4042654 S/0000/63/000/000/0063/0065

AUTHOR: Baranovskiy, V. V.; Meyer, L. N.; Preobrazhenskiy, V. V.

TITLE: Day and night threshold contrasts and brightnesses affecting object visibility

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 63-65

TOPIC TAGS: contrast sensitivity, visual analyzer, threshold contrast, daylight, nightlight, object visibility

ABSTRACT: One of the characteristics of the visual analyzer in determining the visibility of objects is its contrast sensitivity. The ability of the eye to discern minimum differences in the brightness of an object and its background depend upon angular dimensions, the form of the object, the brightness of the surrounding background, and the time of day the object is observed. To test this effect, 70 observers with sharp visual acuity were selected and trained to determine the visibility of objects during their appearance and disappearance in a

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ACCESSION NR: AT4042654

visual field. Threshold contrasts for objects more than 20 minutes in angular size were from 0.04 to 0.06 corresponding to the appearance or disappearance of object visibility against a daylight sky background. The practical moment of object differentiation at night might be obtained if threshold brightness were doubled during an unlimited period of observation.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

ACCESSION NR: AT4042655 S/000/63/000/000/0065/0068

AUTHOR: Baranovskiy, V. V.; Semikopny°y, I. D.

TITLE: New method of studying spatial illusion

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy° konferentsii. Moscow, 1963, 65-68

TOPIC TAGS: spacial illusion, spacial orientation, vestibular analyzer, visual analyzer, vestibular mechanism, optokinetic stimulation, pilot selection

ABSTRACT: The orientation of a man in space involves primarily the interaction of the vestibular and visual analyzers. Consequently, any manifestation of illusionary sensations reflect a variation in this interaction. A method was developed for quantitatively determining individual tendencies towards illusionary sensations during space orientation which arise during the observation of moving objects. In nearly every case, it was observed that functional asymmetry of the labyrinth led to the development of illusion when subjects rotated their bodies more than 720 degrees while pacing in a fixed place for more than

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ACCESSION NR: AT4042655

two minutes with closed eyes following optokinetic stimulation. The authors conclude that this test would be useful in the selection of pilots.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

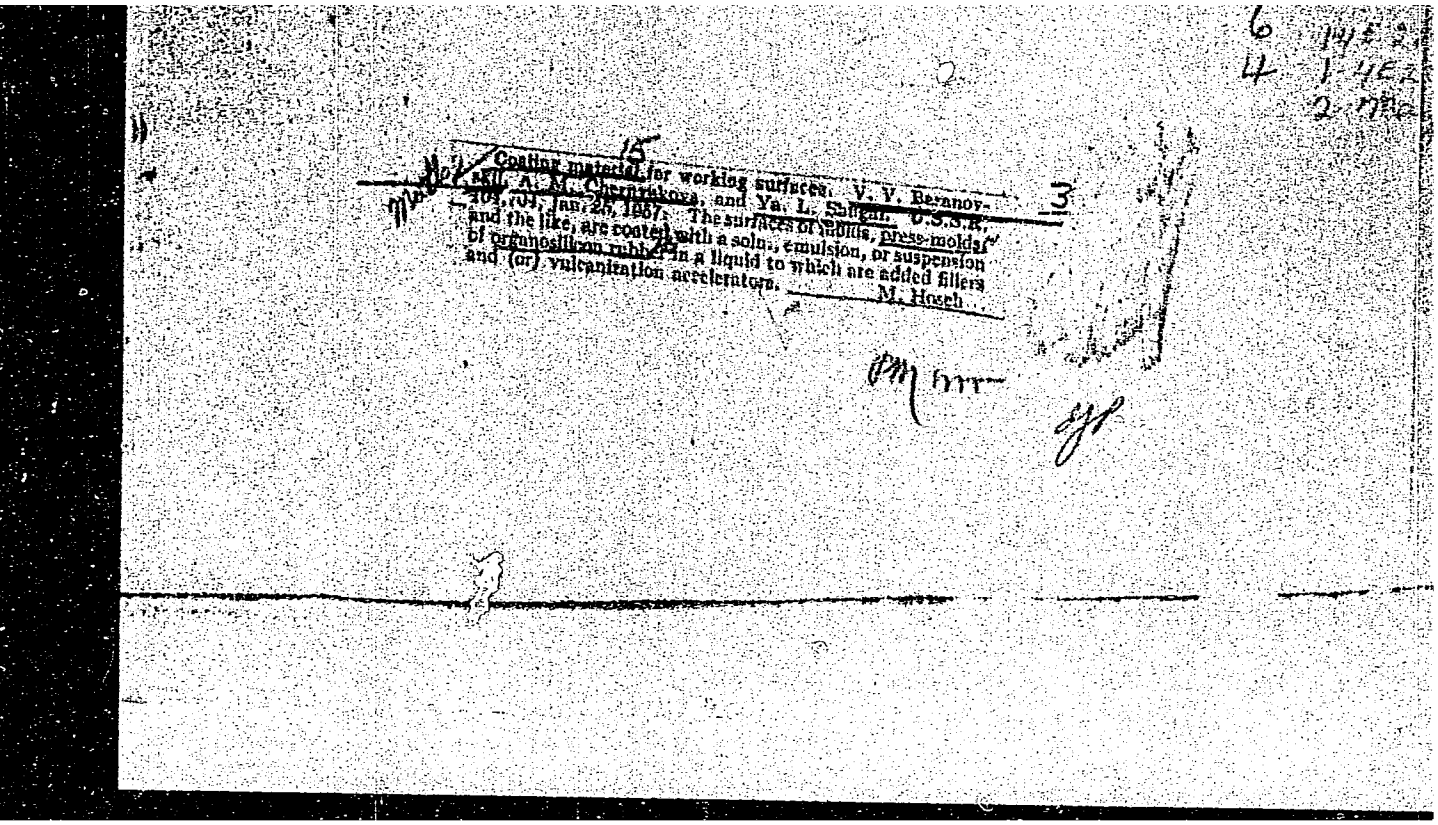
BARA[illegible], V. V.

[illegible] I. [illegible], [illegible]. [illegible] (Sheet [illegible]), [illegible].

The booklet [illegible] production of [illegible] plastics [illegible], [illegible], etc., and [illegible] products by molding, rolling [illegible]; [illegible] raw materials and technological factors with respect to physico-mechanical and electrical properties of the finished products. It also describes [illegible] properties [illegible] plastics and other [illegible] methods of testing [illegible].

The booklet is intended for engineers and technicians, employed in the plastics industry.

SO: [illegible] (Soviet Books), No. [illegible], [illegible], Moscow, (U-[illegible])



15

Coating material for working surfaces. V. V. Bevanov-skii, A. M. Cherepnova, and Ya. L. Sultan. U.S.S.R. 204,703, Jan. 26, 1967. The surfaces of molds, press-molds, and the like, are coated with a soln., emulsion, or suspension of organosilixan rubber in a liquid to which are added fillers and (or) vulcanization accelerators. M. Hosch

BARANOVSKIY, V.V., kandidat tekhnicheskikh nauk.;SKOTNIKOV, K.V., inzhener.; OSIPOV, A.O., inzhener.

Utilizing factory experience in making plastic products at the Cheboksary electric equipment plant. Vest. elektroprom 28 no.1: 70-72 Ja '57. (MLRA 10:4)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina (for Baranovskiy). 2. Cheboksarskiy elektroapparatnyy zavod (for Skotnikov, Osipov).
(Cheboksary--Electric apparatus and appliances)

AUTHORS: Baranovskiy, V. V., Candidate of Technical Sciences, Shugal, Ya. L., Engineer SOV/109-58-8-3/21

TITLE: Plastics in Power Engineering (Plasticheskiye massy v energetike)

PERIODICAL: Elektrichestvo, 1958, Nr 8, pp. 12-16 (USSR)

ABSTRACT: About 80% of the entire output of plastic coating material and about 40% of all pressed plastic material of a thermoreactive type are consumed by electric industry. Plastics used in electrical engineering fall into three classes: 1) Plastic coatings. They are produced from fibrous filling substances and thermoreactive high-polymers. 2) Pressed plastics. They are made from thermoreactive high-polymers and various powder- or fibrous filling substances. The filling substance and the binding agent are homogeneously distributed in the material. 3) Cast plastics for electric insulation. They are based upon thermoplastic high polymers. A table contains a list of the most characteristic features of plastic materials used for electric insulation, which are utilized in Soviet industry. Good dielectric properties do not always coincide with optimum mechanical properties and optimum heat resistivity. Coating plastics and pressed plastics are used preferably in electrical

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engineering. Polyvinylchloride plastics are used most among all types of cast plastics as arc-suppression material in the tubes of lightning protectors. Parts of insulation equipment used now are described. Recently, the Institute of Glass Fibers together with several plants created specimens of heat-resistive glass textures and of combined asbestos-glass textures. They are not yet produced by industry. Possibilities for the further development of plastic materials are shown. The necessity of established experimental stations under the natural tropical conditions of India (Indiya) or of Vietnam (V'etnam) on the basis of international collaboration is emphasized. There are 5 figures and 1 table.

SUBMITTED: May 31, 1958

1. Electrical equipment--Insulation 2. Plastics--Performance
3. Plastics--Properties 4. Glass--Test results

S/191/61/000/002/006/012
B118/B203

AUTHORS: Baranovskiy, V. V., Avrasina, Ye. V.

TITLE: Getinaks made of epoxy phenol aniline formaldehyde resin

PERIODICAL: Plasticheskiye massy, no. 2, 1961, 26 - 28

TEXT: The new Getinaks (paper-filled phenol formaldehyde resin) produced by the authors is based on a combination of phenol formaldehyde resin with epoxy resin; with respect to its dielectric and mechanical characteristics, it is superior to Getinaks of the standard types. Epoxy resins were modified with phenol formaldehyde resins of various types. For the production of laboratory samples of the new Getinaks, ИП-63 (IP - 63) paper was impregnated with various resins, namely with ИК (IK) cresol formaldehyde resin, КАФ (KAF) crescl aniline formaldehyde resin, and ФАФ (FAF) phenol aniline formaldehyde resin. Then, these resins were modified with epoxy resins by simple mixing of varnish solutions at a certain ratio. The impregnated paper was dried in a thermostat to a content of 2-3% of volatile substances. The dried paper was pressed as usually, and

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the samples of Getinaks obtained were tested for electrical stability and dielectric losses. As to these two properties, the best Getinaks sample proved to be that of the type Э (E) on the basis of epoxy phenol aniline formaldehyde resin. Some experimental lots of Getinaks E were produced by the "Izolit" Plant. A comparison of the properties of this product with those of Getinaks Б -80 (B - 80) speaks in favor of the former. Experiments showed that its properties did not change after 40 hr storage in transformer oil medium, and that the transformer oil was not chemically affected. Diagram 2 shows the dependence of the tangent of the angle of dielectric losses on the heating time at 90°C for Getinaks E and B. Owing to its electrical properties, Getinaks E can be recommended as material for work in normally moist air, and for work in transformer oil in cases where particularly high demands are made on the dielectric properties and, especially, on the electrical stability of the material along the layers. The EFL VEI (Electrophysical Laboratory of the All-Union Electrotechnical Institute) cooperated in the investigation. There are 2 figures and 2 tables.

Legend to Fig. 2:

1) Getinaks B;

2) Getinaks E;

a) time, hours

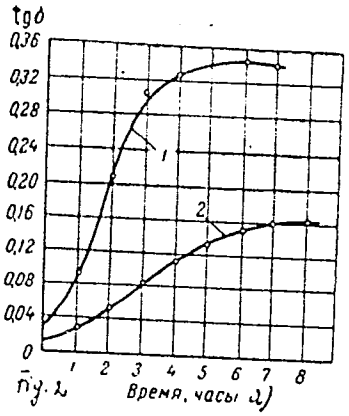

Fig. 2

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BARANOVSKIY, V.V.; YEKIMOV, V.A.

Studying the flow of materials in a rotary sintering kiln for alumina production. TSvet. met. 35 no.6:59-63 Je '62. (MIRA 15:6)
(Kilns, Rotary) (Sintering)

VERESHCHAGIN, F. P.; BARANOVSKIY, V. V.

Determination of certain thermophysical characteristics of alunite for use as raw material. TSvet. met. 35 no.10:78-80 O '62. (MIRA 15:10)

(Alunite--Thermal properties)

L 13368-63 EPF(c)/EPR/EWP(j)/BDS/EWT(m)/ES(s)-2 AFFTC/ASD/ESD-3/
SSD Pr-4/Ps-4/Pc-4/Pt-4 RM/WW

ACCESSION NR: AP3003309 S/0191/63/000/007/0043/0045

AUTHORS: Baranovskiy, V. V.; Dulitskaya, G. M.; Goncharenko, Yu. V. 79

TITLE: Moisture resistance of fiberglass laminates.

SOURCE: Plasticheskiye massy, no. 7, 1963, 43-45

TOPIC TAGS: moisture resistance, fiberglass laminate, plastics, varnish borosilicate glass.

ABSTRACT: The resistance to moisture of electric insulating plastics is of special importance for high voltage apparatus which can work in air with a high moisture content. The present work is dedicated to the study of the effect of multisaturation of glass with a constant increase of a concentration of varnish, the effects of various binders and lubricants, and the effect of glass composition. Commercial fiberglass laminate made from borosilicate glass containing a considerable amount of alkali and alkali earth metals is not suitable for the production of high-voltage-resistant fiberglass laminates even when using epoxyphenol resins which have a high adhesion to glass. By lowering the alkali content in the laminate it is possible to obtain laminates which are sufficiently resistant to moisture and to high-voltage apparatus. The moisture penetrates into fiberglass

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L 13368-63
ACCESSION NR: AP3003309

laminate mainly through microcapillaries which apparently are present between the glass fibers and the binder. The application of various commercial means such as saturation in varnish, change in pressure during compression, the use of various lubricants, length of thermal treatment and others did not improve the resistivity to moisture of the laminates having a borosilicate base. Thus, the composition of glass has a considerable effect on the ability of fiberglass laminates to resist moisture. The laminate containing about 0.2% of alkalis can be recommended for the production of electric insulating fiberglass laminates which are highly resistant to moisture. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 30Jul63 ENCL: 00

SUB CODE: MA NO REF SOV: 003 OTHER: 000

2/2
Card

AM4036544 BOOK EXPLOITATION S/

Baranovskiy, Valentin Viktorovich; Shugal, YAkov Lazarevich

Laminated plastics in electrical engineering (Sloisty*ye plastiki elektrotekhnicheskogo naznacheniya), Moscow, Gosenergoizdat, 1963, 230 p. illus., biblio. Errata slip inserted. 5,200 copies printed. Series note: Polimery* v elektroizolyatsionnoy tekhnike, vy*p. 6.

TOPIC TAGS: laminated plastic, electrical engineering,

PURPOSE AND COVERAGE: This book describes the production of laminated plastics (hetinax, textolite, glass textolite, and others) and the fabrication of articles by molding, winding, and machining. There is a detailed examination of the mechanical and dielectric properties of lamellar plastics and the methods of testing them are described. The book is intended for engineers, technicians working in the plastics industry and the electrical industry, in communications and other branches of the economy where laminated plastics are used.

TABLE OF CONTENTS [abridged]:

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Ch. IV. Sheet laminated plastics -- 106
Ch. V. Shaped articles -- 149
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Ch. VII. Machining laminated plastics -- 172
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SUB CODE:MT, GC SUBMITTED: 28 Aug63 NR REF SOV: 017

OTHER: 002 DATE ACQ: 06Apr64

Card 2/2

BARANOVSKIY, V. Ya.

SHUR, Ua. S., BARANOVSKIY, V.Ya., POPOV, A. I.

Temperature Ratio of the Coercive Force in Ferromagnetic Monocrystals. ZhETF 9, 1512, 1939. Mbr., Magnetic Phenomena, -1939-. Ural Affil. Acad. Sci., -1939-.

BARANOVSKIY, V. Ye., RAVIKOVICH, S. D. and SHIMANSKIY, Yu. I.

"Investigation of the Heats of Evaporation of Solutions", a paper presented at the second conference on the Liquid State of Matter, Kiev, 30 May to 3 June 1955, Usp. Fiz. Nauk, April 1955

BARANOVS'KIY, V. YE.

USSR/Atomic and Molecular Physics - Statistical Physics, Thermodynamics, D-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34364

Author: Golik, O. Z., Ravikovich, S. D., Shimans'kiy, Yu. I., Baranovs'kiy, V. Ye.

Institution: Institute of Physical Chemistry, Kiev State University

Title: Investigation of Latent Heat of Evaporation of Liquids. II. Investigation of Physical Solutions

Original Periodical: Dopovidi AN URSR, 1955, No 3, 271-275; Ukrainian; Russian resumé

Abstract: It is shown that the temperature-dependence curves of latent heats of evaporation of solutions of methyl and ethyl alcohols in butyl alcohol, and of iodobenzene and chlorobenzene in brombenzene, lie between the corresponding curves of the components and range in an order determined by the critical temperatures of the liquids. The concentration dependence of the heat of evaporation of solutions of alcohol and haloid derivatives of benzene is linear, and a pronounced minimum is disclosed for the C_6H_{14} and C_7H_{16} and C_8H_{18} solutions.

1 of 1

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520010-9"

SOV/21-58-2-22/28

AUTHORS: Golik, A.Z., Ravikovich, S.D., Baranovskiy, V.Ye.

TITLE: The Investigation of Evaporation Heats of Solutions of Some Deuterium Compounds (Issledovaniye teplot ispareniya rastvorov nekotorykh deyterosoyedineniy)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 2, pp 210-212 (USSR)

ABSTRACT: The authors investigated the evaporation heat of heavy water solutions in ordinary water and of deuterium-butanol in butanol. It is shown that in the first case the concentration dependence of the evaporation heat has a clear-cut maximum at 40°C, and in the second case it degenerates into an S-shaped curve. The regularities observed indicate the complicated nature of intermolecular interaction. Hence the authors draw the conclusion that the conception of an "ideal" solution as a standard pattern for comparing different solutions is not applicable.
There are 2 graphs, and 7 references, 3 of which are Soviet, 2 English, 1 German and 1 American.

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SOV/21-58-2-22/28

The Investigation of Evaporation Heats of Solutions of Some Deuterium Compounds

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)
Kiyevskiy meditsinskiy institut (Kiyev Medical Institute)

PRESENTED: By Member of the AS UkrSSR, A.I. Brodskiy

SUBMITTED: May 9, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

GOLIK, A.Z.; BARANOVSKIY, V.Ye.

Heat of vaporization, composition of vapors, and surface tension of solutions of paraffins and alcohols. Ukr.khim.zhur. 27 no.5: 574-577 '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Paraffins) (Alcohols)

GOLIK, A.Z.; BAZANOVSKIY, V.Ye.

Latent heat of vaporization of alcohols in acetone solutions. Ukr.khim.zhur. 27 no.5:577-580 '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Alcohols) (Heat of vaporization)

BARANOVSKIY, V.Ye.; SHIMANSKIY, Yu.I.; GOLIK, A.Z.

Heat of evaporation of the ternary system ethyl alcohol-butyl alcohol - acetone. Ukr.khim.zhur. 28 no.4:484-486 '62.
(MIRA 15:8)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G.Shevchenko.
(Ethyl alcohol) (Butyl alcohol) (Acetone)
(Heat of evaporation)

BARANOVSKIY, V. Ye.

Micromethod for measuring the heat of evaporation. Ukr. khim. zhur. 28 no.3:326-328 '62. (MIRA 15:10)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko.

(Heat of evaporation)

BARANOVSKIY, V.Ye.; GOLIK, A.Z.

Latent heat of vaporization of water-alcohol solutions. Ukr. khim. zhur. 29 no.2:137-141 '63. (MIRA 16:6)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Heat of evaporation) (Alcohols)

ACC NR: AP7008929 SOURCE CODE: UR/0199/66/007/005/0974/1001

AUTHOR: Baranovskiy, Ye. P.

ORG: none

TITLE: Local minima of the density of a lattice covering by equal spheres in a four-dimensional Euclidean space

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 7, no. 5, 1966, 974-1001

TOPIC TAGS: Euclidean space, geometry

SUB CODE: 12

ABSTRACT: If a point lattice Γ is given in an n-dimensional Euclidean space E^n, there is defined thereby the quantity

$$D_n(\Gamma) = V_0(n)\frac{R^n}{V_n}, \qquad (1)$$

where $V_0(n)$ is the volume of an n-dimensional sphere of unit radius, V_n is the volume of the basic parallelepiped Π of the lattice, and R is the radius of the covering spheres. The number $D_n(\Gamma)$ is said to be the density of lattice covering in E^n by equal spheres for the given point lattice Γ. The present article considers the problem of finding local minima of density (1) for the case n = 4. This is done on a set of primitive lattices. It is shown that two local minima exist within domains of lattices of the first or second type. A third local minimum of density $D_4(\Gamma)$ is found on one of the lattices of the

Card 1/2 UDC: 513.82

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ACC NR: AP7008929

third type, and it is shown that this minimum is unique within lattices of the third type. With respect to special lattices corresponding to the boundary points of domains in a space of parameters of lattices, it is shown that density $D_L(\Gamma)$ at any such point decreases with a displacement into at least one of the domains having this point as part of its boundary.

The author thanks B. N. Delone, S. S. Ryshkov, and S. V. Smirnov.

Orig. art. has: 4 figures and 86 formulas. [JPRS: 40,303]

Card 2/2

L 27687-66

ACC NR: AP6005611 SOURCE CODE: UR/0233/65/000/003/0096/0102

AUTHOR: Abdullayev, A. A.; Baranovskiy, V. Yu.

ORG: none

TITLE: Calculation of thermal parameters of structural elements of semiconductor devices

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1965, 96-102

TOPIC TAGS: semiconductor device, transistor, heat capacity

ABSTRACT: P. R. Strickland's thermoequivalent circuit for calculating thermal parameters of semiconductor devices (IBM j. Res. Dev., no. 1, 1959) is held inadequate. A new thermoequivalent circuit with L-shaped RC-sections is suggested. An experimental cooling curve of a p-n junction is known; its equation is:

$$\theta'(t) - \theta'_0 = \sum_{i=1}^{n} \theta'_i e^{P'_i t}.$$

The thermal quantities are replaced with electric, which

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L 27687-66
ACC NR: AP6005611

results in: $U(t) - E_0 = \sum_{i=1}^{n} \theta_i e^{P_i t}$. A system of 2n equations with 2n unknowns is set up for determining real values of R_i and C_i on the basis of known θ_i and P_i (from the cooling curve). Solution of this system yields true values of thermal resistances and heat capacities of structural elements of a semiconductor device. A practical example illustrates the method. Orig. art. has: 3 figures, 30 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 26Jul64 / ORIG REF: 002 / OTH REF: 001

Card 2/2

BARANOVSKIY, Ye. A.

USSR/ Engineering - Machine construction

Card 1/1 Pub. 128 - 32/35

Authors : Baranovskiy, Ye. A., Engineer

Title : The assembly and repair of automotive equipment

Periodical : Vest. mash. 35/3, 90 - 91, Mar 1955

Abstract : A review is presented of the book, "The Assembly and Repair of Automotive Equipment," by L. M. Gidon, published in 1954 by the State Publishing Office for Machine Construction Literature, and containing 310 pages. The book is given a good rating as a reference book on the subject.

Institution : .....

Submitted : .....

GIDON, Lev Moiseyevich, inzhener; BARANOVSKIY, Ye.A., inzhener, re se zent; PUL'MANOV, N.V., kandidat tekhnicheskikh nauk, redaktor; POPOVA, S.M., tekhnicheskiy redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor

[Steam engine regulating equipment] Regulirovanie lokomobil'nykh ustanovok. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 229 p. (MLRA 9:12)
(Steam engines) (Automatic control)

BARANOVSKIY, Ye.A.

Readers' conference. Vest. mash. 38 no.3:89-90 Mr '58. (MIRA 11:2)

1. Chlen Redaktsionnogo soveta zhurnala "Vestnik mashinostroyeniya."
(Machine tools--Congresses)

BARANOVSKIY, Ye.P. (Ivanovo)

Filling n-dimensional Euclidean spaces with equal spheres.
Izv. vys. ucheb. zav.; mat. no.2:14-24 '64. (MIRA 17:8)

BARANOVSKIY, Ya.P.

Minimum density of a latticed covering for a space by spheres of equal size. Uch.zap.Ivan.ges.ped.inst. 34:71-76 '64. (MIRA 18:4)

BARA[illegible], [illegible].

Local density minima of the lattice covering for a four-dimensional Euclidean space by equal spheres. Dokl. AN SSSR 164 no.1:13-15 S '65. (MIRA 18:9)

1. Submitted May 10, 1965.

BARANOVSKIY, Ye.P.

On ε-entropy and ε-capacity of a set of functions satisfying Lipshits's condition. Uch. zap. Ivan. gos. ped. inst. 31:3-15 '63. (MIRA 19:1)

1. Submitted November 20, 1960.

BARANOVSKIY, Ye.Ya.

Some characteristics of dysgraphia in focal lesions of the left temporal region with sensory aphasia syndrome. Zhur.nevr. i psikh. 59 no.8:947-953 '59. (MIRA 12:12)

1. Otdel nevrologii (zav. - prof. L.B. Litvak) i laboratoriya tsito-arkhitektoniki Ukrainskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta (dir. P.I. Kovalenko), Khar'kov.
(AGRAPHIA etiol.)
(APHASIA etiol.)
(TEMPORAL LOBE dis.)

BARANOVSKIY, Ye.Ya., starshiy nauchnyy sotrudnik; GOLUBOVA, R.A., starshiy nauchnyy sotrudnik (Khar'kov)

Some disorders of the cortical functions in the clinical aspects of dynamic disorders of cerebral circulation. Vrach. delo no.5: 52-56 My '62. (MIRA 15:6)

1. Otdel nevrologii (zav. - zasluzhennyy deyatel' nauki, prof. L.B. Litvak) Ukrainskogo nauchno-issledovatel'skogo psikho-nevrologicheskogo instituta.
(CEREBRAL CORTEX)
(CEREBROVASCULAR DISEASE)

L 34119-66 EWP(e)/EWT(m)/EWP(j)/T IJP(c) DS/AW/RM/AH
ACC NR: AP6008958 SOURCE CODE: UR/0314/65/000/011/0031/0033

AUTHOR: Shmatkov, V. A. (Candidate of technical sciences); Zarif'yan, A. Z. (Candidate of technical sciences); Baranovskiy, Yu. I. (Engineer)

ORG: None

TITLE: Study of the mechanical properties of impregnated graphites

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 11, 1965, 31-33

TOPIC TAGS: graphite, phenolformaldehyde, bending strength, shear strength, tensile strength, compressive strength

ABSTRACT: At the Strength of Materials Laboratory, Novocherkassk Polytechnic Institute (laboratoriya soprotivleniya materialov Novcherkasskogo politekhnicheskogo instituta), the mechanical characteristics of certain graphitized materials produced by the Novocherkassk Electrode Plant (Novocherkasskiy elektrodnyy zavod) were determined. The tensile, compressive, bending, and shear strengths of EG electrode graphite and ZKhP fine-grained cold-pressed graphite, both impregnated with phenol-formaldehyde resin, were measured at -50, +20, +100, and +150C. The elastic moduli in tension and compression were also determined at +20C. The tests showed that impregnated EG and ZKhP graphites at 20C have elastic moduli and strength characteristics that are close in magnitude to the characteristics of analogous materials produced by other plants in the Soviet Union and abroad. These graphites show a marked anisotropy of the mechanical properties. All their strength characteristics decrease markedly as the temperature rises to 100—150C. Under load, failure occurs abruptly, without the development

Card 1/2 UDC 620.17:546.26-162.001.2

L 34119-66

ACC NR: AP6008958

of plastic strains. Orig. art. has: 3 figures and 3 tables.

SUB CODE: 11 / SUBM DATE: none / ORIG REF: 004

Card 2/2

L 3788-66 EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWP(j)/T/EWP(b) WW/RM/WH

ACCESSION NR: AP5023215 UR/0374/65/000/004/0148/0151
678.5:539.3

AUTHOR: Shmatkov, V. A. (Novocherkassk); Zarif'yan, A. Z. (Novocherkassk); Baranovskiy, Yu. I. (Novocherkassk)

TITLE: Investigation of mechanical properties of some graphitoplastics

SOURCE: Mekhanika polimerov, no. 4, 1965, 148-151

TOPIC TAGS: graphite, structural plastic, chemical resistant material, composite material

ABSTRACT: The object of the study was to determine some important mechanical properties of two brands of commercial graphitoplastics, ATM-1 and ATM-1-fine fraction, both being products of the Novocherkassk Electrode Plant. These two graphitoplastics are widely used for the manufacturing of chemical equipment. The ATM-1 graphitoplastic contains 33 wt % of coarse graphite, 49 wt % of graphite powder, and 18 wt % of binder. The binder is made of 83 wt % phenolformaldehyde resin Nr. 18, 11.1 wt % of technical urotropin, 3.9 wt % technical grade stearine, and 1.7 wt % calcium hydroxide. The physical characteristics of ATM-1 and ATM-1-fine fraction are: specific gravity--1.80 to 1.85 kg/cm^3, specific electrical conduc-

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L 3788-66

ACCESSION NR: AP5023215

tance--70 to 150 ohm·mm^2/m, thermal stability--up to 130°C, thermal conductivity--30 to 35 kcal/m·hr·°C, water absorption--0.01 to 0.10 g/100 cm^2 and impermeability to air up to 5 atm at 10 mm in thickness. Tensile-, compressive-, bending-, and shearing strengths are given for both materials in -50 to +115°C range. Young's moduli for tension and compression were determined at 20°C. Orig. art. has: 2 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 29Mar65 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 005 OTHER: 000

GC

Card 2/2

BARANOVSKIY, Yu.V., inzhener; KOMISSARZHEVSKAYA, V.N., inzhener.

[Surface finish of automobile tractor parts] Chistota poverkhnosti detalei v avtotraktorostroenii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.i sudostroit. lit-ry, 1953. 121 p. (MLRA 7:2)

1. Moscow. Gosudarstvennyy vsesoyuznyy institut avtomobil'noy tekhnologii. (Surfaces (Technology))

GORETSKAYA, Z.D.; BARANOVSKIY, Yu.V.; BERLINER, M.S.; BRAKHMAN, L.A.; KUZNETSOVA, N.I.; MALYAROV, L.N.; CHUYAN, K.I.; DOBRUSINA, Ye.M.; LEONT'YEV, I.B.; MARTYNOV, B.P.; ROSLYAKOVA, S.V.; RUGAYEVA, V.A.. Prinimal uchastiye DMITRIYEV, I.P.. STRUZHESTRAKH, Ye.I., inzh., red.; EL'KIND, V.D., tekhn.red.

[General engineering norms for cutting operations and time for broaching] Obshchemashinostroitel'nye normativy rezhimov rezaniia i vremeni na protiazhnye raboty. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 73 p. (MIRA 12:12)

1. Moscow. Nauchno-issledovatel'skiy institut truda. TSentral'noye byuro promyshlennykh normativov po trudu. 2. Rabotniki Nauchno-issledovatel'skogo instituta tekhnologii avtomobil'noy promyshlennosti (NIITavtoprom) (for all, except Struzhestrakh, El'kind).
(Broaching machines)

BARANOVSKIY, Yu.V.

Estimating the efficiency of boring rig cleaning systems and methods of calculating flush fluid components. Trudy TSNIIPodzem-shakhtstroia no.3:30-38 '64. (MIRA 18:9)

BULYNKO, M.G., kand.tekhn.nauk; RAVICH, B.M., inzh.; BARANOVSKIY, Yu.V., inzh.

Mechanization of the grinding and setting of the molding part of stamping presses. Torf.prom. 36 no.1:32-33 '59. (MIRA 12:3)

1. Kiyevskiy torfyanoy institut (for Bulynko). 2. Moskovskiy gosudarstvennyy universitet (for Ravich, Baranovskiy).
(Germany, East--Peat machinery)

BARANOVSKIY, Yu.V.

Improving the clay mixture for drilling rigs. Trudy TSNIIPodzemshakhtstroia no.1:97-104 '62. (MIRA 16:8)

(Drilling fluids)

BARANOVSKIY, Yu.V.

Flat revolving sieve for conditioning borehole flush muds.
Trudy TSNIIPodzemshakhtstroia no.2:47-56 '63. (MIRA 17:5)

BARANOVSKY, Niculina

Territorial distribution of viticulture in Rumania. Probleme geog 8: 347-365 '61.

BARANOVSKY, Niculina

"The February 21, 1956 Rumanian Census." Reviewed by Niculina Baranovsky. Probleme geog 9:366-368 '62. (publ. '63)

BARANOVSKY, Niculina

The geographical peculiarities in the territorial distribution of industrial and agricultural production in the Ploesti region. Probleme geog 9:201-215 '62. (publ. '63)

POLAND

SWINARSKI, Antoni, prof. dr; BARANOWNA-TARASIUK, Maria, agr

1. Dept. of Inorganic Chemistry, Univ. of Torun (Katedra Chemii Nieorganicznej Uniwersytetu, Torun)-(for Swinarski); 2. Physico-Chemical Metrological Dept., Central Bureau of Standards (Zaklad Metrologiczny Fizyko-Chemii, Glowny Urzad Miar), Warsaw - (for Baranowna-Tarasiuk)

Warsaw, Chemia analityczna, No 3, May-June 1966, pp 563-566

"Refractometric determination of bromide complexes of cadmium."